

Amendments to the Claims

Please amend the claims as follows:

1.-126. (Canceled)

127. (Currently amended) A method for prolonging life of drilling equipment, the method comprising:

providing a drilling fluid system having effective rheology and fluid loss control

properties, the drilling fluid system comprising a continuous phase comprising as an integral component a dispersion comprising a quantity of fatty acid soap comprising alkali metal selected from the group consisting of lithium, potassium, rubidium, cesium, and combinations thereof; and,

drilling through a subterranean formation performing drilling operations using the drilling fluid system under conditions effective to maintain effective rheology and fluid loss control properties and to react said fatty acid soap with one or more metal surfaces of drilling equipment in contact with said drilling fluid system, thereby producing produce lubricated drilling equipment comprising one or more metal surface having comprising a substantially continuous lubricating film providing improved lubricity as reflected in an increase in lubricating film strength compared to a control during extreme pressure testing.

128. (Previously presented) The method of claim 127 wherein the conditions comprise a temperature of 250 °F (121 °C).

129. (Previously presented) The method of claim 127 wherein the conditions comprise a temperature of 300 °F (148 °C).

130. (Previously presented) The method of claim 127 wherein the conditions comprise a temperature of 450 °F (232 °C).

131. (Previously presented) The method of claim 127 wherein the improved lubricity comprises an increase of 25% or more in lubricating film strength compared to a control during extreme pressure testing.

132. (Previously presented) The method of claim 128 wherein the improved lubricity comprises an increase of 25% or more in lubricating film strength compared to a control during extreme pressure testing.

133. (Previously presented) The method of claim 129 wherein the improved lubricity comprises an increase of 25% or more in lubricating film strength compared to a control during extreme pressure testing.

134. (Previously presented) The method of claim 130 wherein the improved lubricity comprises an increase of 25% or more in lubricating film strength compared to a control during extreme pressure testing.

135. (Previously presented) The method of claim 127 comprising selecting the alkali metal from the group consisting of lithium, potassium, and combinations thereof.

136. (Previously presented) The method of claim 127 comprising selecting lithium as the alkali metal.

137. (Previously presented) The method of claim 133 comprising selecting the alkali metal from the group consisting of lithium, potassium, and combinations thereof.

138. (Previously presented) The method of claim 133 comprising selecting lithium as the alkali metal.

139. (Previously presented) The drilling fluid system of claim 127 wherein the quantity is from about 0.01 to about 10 vol.% of said drilling fluid system.

140. (Currently amended) The ~~drilling fluid system~~method of claim 127 wherein the quantity is from about -2 to about 5 vol.%.

141. (Currently amended) A method for prolonging life of drilling equipment, the method comprising:

providing a drilling fluid system having effective rheology and fluid loss control

properties comprising an aqueous continuous phase comprising as an integral component a dispersion comprising a quantity of fatty acid soap comprising alkali metal selected from the group consisting of lithium, potassium, rubidium, cesium, and combinations thereof; and,

drilling through a subterranean formation performing drilling operations using the drilling fluid system under conditions effective to maintain effective rheology and fluid loss control properties and to react said fatty acid soap with one or more metal surfaces of drilling equipment in contact with said drilling fluid system, thereby producing produce lubricated drilling equipment comprising one or more metal surface having comprising a substantially continuous lubricating film providing improved lubricity, as reflected in an increase in lubricating film strength compared to a control during extreme pressure testing.

142. (Previously presented) The method of claim 141 wherein the conditions comprise a temperature of 250 °F (121 °C).

143. (Previously presented) The method of claim 141 wherein the conditions comprise a temperature of 300 °F (148 °C).

144. (Previously presented) The method of claim 141 wherein the conditions comprise a temperature of 450 °F (232 °C).

145. (Previously presented) The method of claim 141 wherein the improved lubricity comprises an increase of 25% or more in lubricating film strength compared to a control during extreme pressure testing.

146. (Previously presented) The method of claim 142 wherein the improved lubricity comprises an increase of 25% or more in lubricating film strength compared to a control during extreme pressure testing.

147. (Previously presented) The method of claim 143 wherein the improved lubricity comprises an increase of 25% or more in lubricating film strength compared to a control during extreme pressure testing.

148. (Previously presented) The method of claim 144 wherein the improved lubricity comprises an increase of 25% or more in lubricating film strength compared to a control during extreme pressure testing.

149. (Previously presented) The method of claim 141 comprising selecting the alkali metal from the group consisting of lithium, potassium, and combinations thereof.

150. (Previously presented) The method of claim 141 comprising selecting lithium as the alkali metal.

151. (Previously presented) The method of claim 147 comprising selecting the alkali metal from the group consisting of lithium, potassium, and combinations thereof.

152. (Previously presented) The method of claim 147 comprising selecting lithium as the alkali metal.

153. (Previously presented) The method of claim 141 wherein the quantity is from about 0.01 to about 10 vol.% of said drilling fluid system.

154. (Previously presented) The method of claim 141 wherein the quantity is from about 2 to about 5 vol.%.

155. (Currently amended) The ~~drilling fluid system~~method of claim 141 comprising polymer comprising one or more monomers comprising acrylamide.

156. (Currently amended) The ~~drilling fluid system~~method of claim 147 comprising polymer comprising one or more monomers comprising acrylamide.

157. (Currently amended) The ~~drilling fluid system~~method of claim 150 comprising polymer comprising one or more monomers comprising acrylamide.

158. (Currently amended) The ~~drilling fluid system~~method of claim 141 comprising polymer comprising a combination of acrylamide alkyl alkane sulfonate monomer and dialkyl acrylamide monomer.

159. (Currently amended) The ~~drilling fluid system~~method of claim 141 comprising polymer comprising a combination of AMPS and DMA.

160. (Currently amended) A method for prolonging life of drilling equipment, the method comprising:

providing a drilling fluid system having effective rheology and fluid loss control

properties, the drilling fluid system comprising one or more polymers comprising one or more monomers comprising acrylamide and a continuous phase comprising as an integral component a dispersion comprising a quantity of fatty acid soap comprising alkali metal selected from the group consisting of lithium, potassium, rubidium, cesium, and combinations thereof,

drilling through a subterranean formation performing drilling operations using the drilling fluid system under conditions effective to maintain effective rheology and fluid loss control properties and to react said fatty acid soap with one or more metal surfaces of drilling equipment in contact with said drilling fluid system, thereby producing produce lubricated drilling equipment comprising one or more metal surface having comprising a substantially continuous lubricating film providing improved lubricity, as reflected in an increase in lubricating film strength compared to a control during extreme pressure testing.

161. (Previously presented) The method of claim 160 wherein the continuous phase is aqueous.

162. (Previously presented) The method of claim 160 wherein the alkali metal is selected from the group consisting of lithium, potassium, and combinations thereof.

163. (Previously presented) The method of claim 160 wherein the dispersion remains thermally stable when the conditions comprise a temperature of 250 °F (121 °C).

164. (Previously presented) The method of claim 160 wherein the dispersion remains thermally stable when the conditions comprise a temperature of 300 °F (148 °C).

165. (Previously presented) The method of claim 160 wherein the dispersion remains thermally stable when the conditions comprise a temperature of 450 °F (232 °C).

166. (Previously presented) The method of claim 160 wherein the improved lubricity is demonstrated by an increase of 25% or more in lubricating film strength compared to a control during extreme pressure testing.

167. (Previously presented) The method of claim 160 wherein the quantity is from about 0.01 to about 10 vol.% of said drilling fluid system.

168. (Previously presented) The method of claim 160 wherein the quantity is from about 2 to about 5 vol.%.

169. (Currently amended) The ~~drilling fluid system~~ method of claim 160 comprising polymer comprising a combination of one or more acrylamide alkyl alkane sulfonate monomers and one or more dialkyl acrylamide monomers.

170. (Currently amended) The ~~drilling fluid system~~method of claim 160 comprising polymer comprising a combination of AMPS and DMA.

171. (Previously presented) A method for prolonging life of drilling equipment, the method comprising:

providing a drilling fluid system having effective rheology and fluid loss control properties, the drilling fluid system comprising as an integral component a continuous phase comprising a dispersion comprising a quantity of lithium stearate,

drilling through a subterranean formation performing drilling operations using the drilling fluid system under conditions effective to maintain effective rheology and fluid loss control properties and to react said fatty acid soap with one or more metal surfaces of drilling equipment in contact with the drilling fluid system, thereby producing~~produce~~lubricated drilling equipment comprising one or more metal surface having comprising a substantially continuous lubricating film providing improved lubricity, as reflected in an increase in lubricating film strength compared to a control during extreme pressure testing.

172. (Previously presented) The method of claim 171 wherein the continuous phase is aqueous.

173. (Previously presented) The method of claim 171 wherein the dispersion remains thermally stable when the conditions comprise a temperature of 250 °F (121 °C).

174. (Previously presented) The method of claim 171 wherein the dispersion remains thermally stable when the conditions comprise a temperature of 300 °F (148 °C).

175. (Previously presented) The method of claim 172 wherein the dispersion remains thermally stable when the conditions comprise a temperature of 300 °F (148 °C).

176. (Previously presented) The method of claim 171 wherein the dispersion remains thermally stable when the conditions comprise a temperature of 450 °F (232 °C).

177. (Previously presented) The method of claim 171 wherein the improved lubricity comprises an increase of 25% or more in lubricating film strength compared to a control during extreme pressure testing.

178. (Previously presented) The method of claim 173 wherein the improved lubricity is demonstrated by an increase of 25% or more in lubricating film strength compared to a control during extreme pressure testing.

179. (Previously presented) The method of claim 174 wherein the improved lubricity comprises an increase of 25% or more in lubricating film strength compared to a control during extreme pressure testing.

180. (Currently amended) The ~~drilling fluid system~~method of claim 171 wherein said quantity is from about 0.01 to about 10 vol.% of said drilling fluid system.

181. (Currently amended) The ~~drilling fluid system~~method of claim 171 wherein said quantity is from about -2 to about 5 vol.%.

182. (Currently amended) The ~~drilling fluid system~~method of claim 171 comprising polymer comprising one or more monomers comprising acrylamide.

183. (Currently amended) The ~~drilling fluid system~~method of claim 171 comprising polymer comprising a combination of one or more acrylamide alkyl alkane sulfonate monomers and one or more dialkyl acrylamide monomers.

184. (Currently amended) The ~~drilling fluid system~~method of claim 171 comprising polymer comprising a combination of AMPS and DMA.

185. (Currently amended) The ~~drilling fluid system~~method of claim 175 comprising polymer comprising one or more monomers comprising acrylamide.

186. (Currently amended) The ~~drilling fluid system~~method of claim 175 comprising polymer comprising a combination of one or more acrylamide alkyl alkane sulfonate monomers and one or more dialkyl acrylamide monomers.

187. (Currently amended) The ~~drilling fluid system~~method of claim 175 comprising polymer comprising a combination of AMPS and DMA.

188. (Currently amended) The ~~drilling fluid system~~method of claim 176 comprising polymer comprising one or more monomers comprising acrylamide.

189. (Currently amended) The ~~drilling fluid system~~method of claim 176 comprising polymer comprising a combination of one or more acrylamide alkyl alkane sulfonate monomers and one or more dialkyl acrylamide monomers.

190. (Currently amended) The ~~drilling fluid system~~method of claim 176 comprising polymer comprising a combination of AMPS and DMA.